SNELLEN DECIMAL EYE CHART
L10
L11
L125
L14
L16

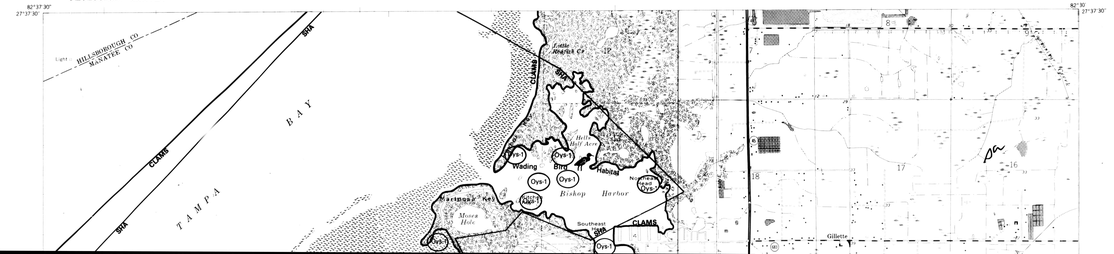
SNELLEN DECIMAL EYE CHART
L10
L11
L125
L14
L16

I49.89/2:85(15)mapA13

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

STATE OF FLORIDA

PALMETTO QUADRANGLE
FLORIDA
7.5 MINUTE SERIES (TOPOGRAPHIC)

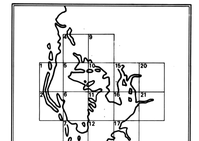


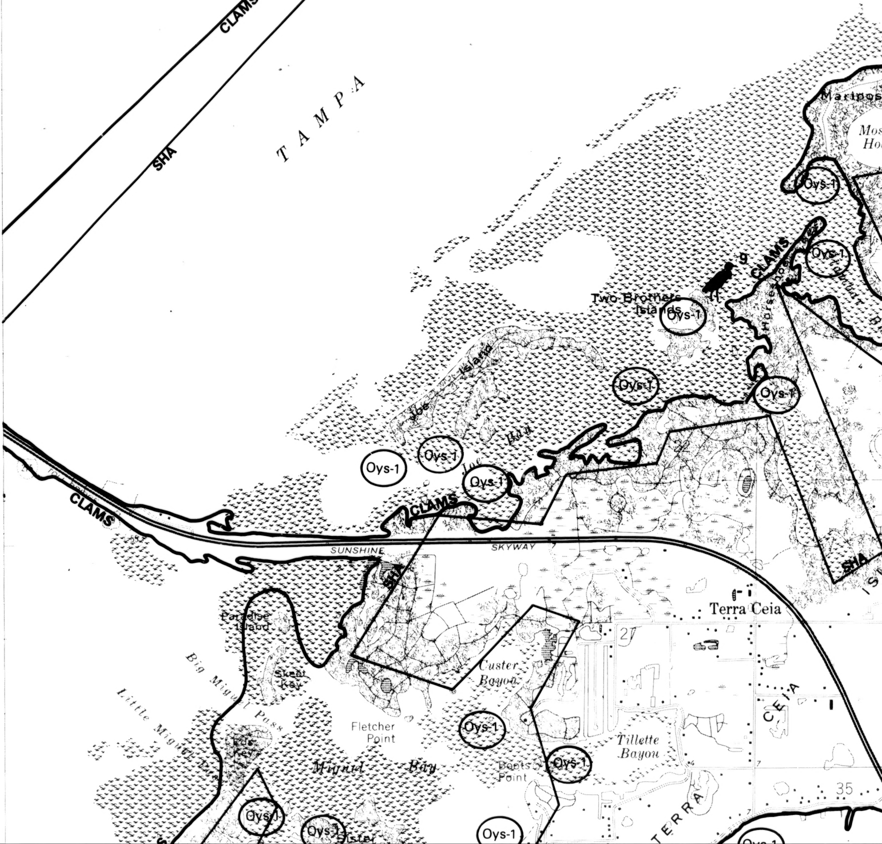
MAP A13

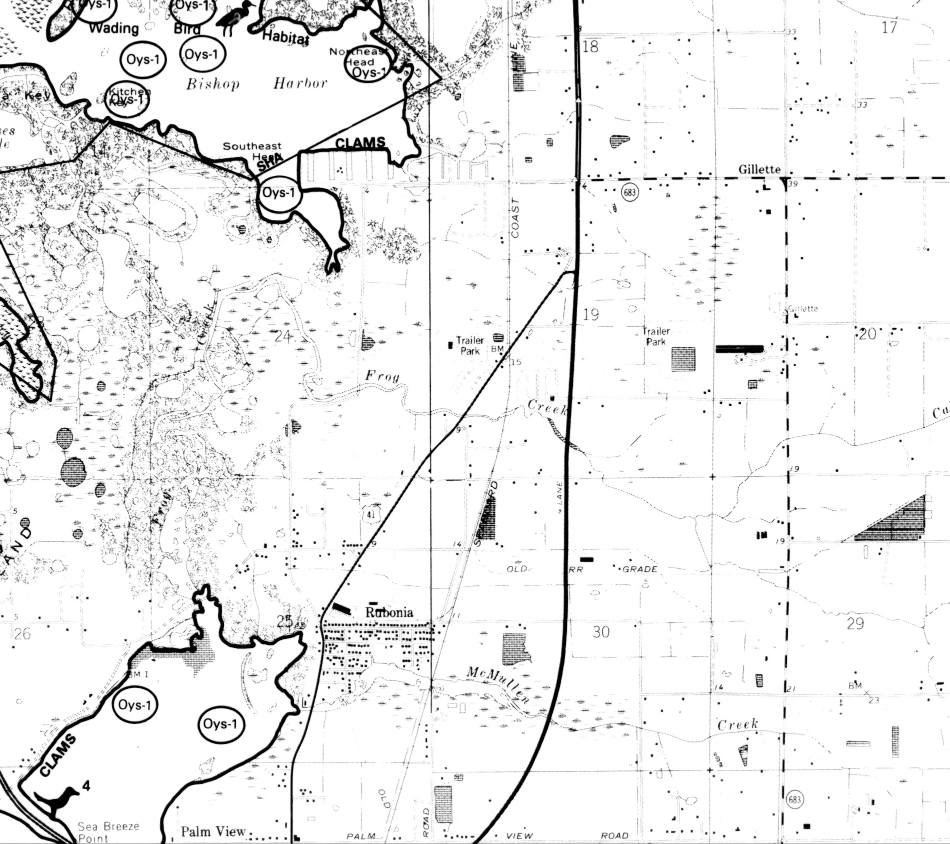
TAMPA BAY ENVIRONMENTAL ATLAS

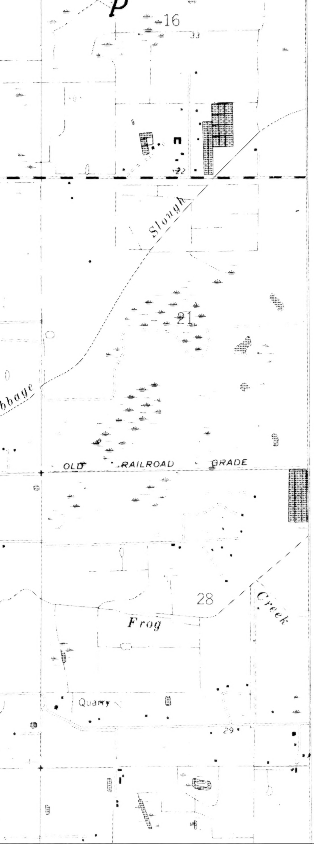
BIOLOGICAL RESOURCES

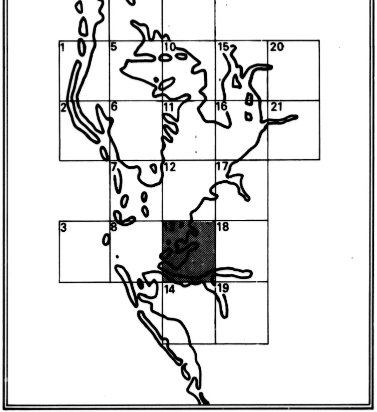
PALMETTO




CLAMS
SHA
TAMPA
Mariposa
Oys-1
Oys-1
CLAMS
Two Brothers Islands
Oys-1
Joe Island
Oys-1
Oys-1
Oys-1
Joe Bay
Oys-1
Oys-1
CLAMS
CLAMS
SUNSHINE
SKYWAY
SHA
SHA
22
Terra Ceia
27
Paradise Island
Skeet Key
Big Miguel Pass
Little Miguel
Custer Bayou
Fletcher Point
Oys-1
Miguel Bay
Boots Point
Oys-1
Tillette Bayou
CEIA
TERRA
35
Oys-1
Oys-1
Oys-1


Oys-1
Oys-1
Wading
Bird
Habitat
Oys-1
Oys-1
Northeast
Head
Oys-1
Bishop
Harbor
Kitchen
Key
Oys-1
Key
Southeast
Head
SHA
CLAMS
Oys-1
COAST
LINE
18
17
33
33
Gillette
683
39
19
Gillette
20
Trailer
Park
Trailer
Park
BM
15
24
Frog
Creek
Frog
Creek
Creek
Ca
9
41
9
14
SEABOARD
LANE
OLD
RR
GRADE
19
19
Rubonia
25
26
30
29
McMullen
Creek
BM 1
Oys-1
Oys-1
CLAMS
4
14
21
BM
23
683
Sea Breeze
Point
Palm View
OLD
ROAD
PALM
VIEW
ROAD


P
16
33
22
Slough
21
bbage
OLD RAILROAD GRADE
28
Frog
Creek
Quarry
29


1
5
10
15
20
2
6
11
16
21
7
12
17
3
8
13
18
14
19

Scale 1:24,000

U.S. DEPARTMENT OF THE INTERIOR MARCH 3, 1849

1984

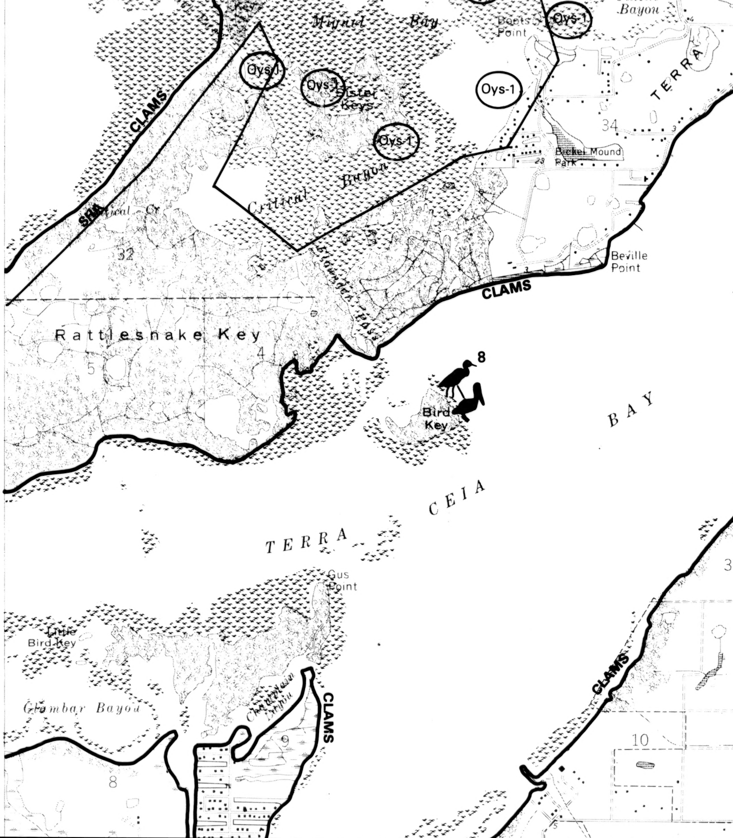
U.S. FISH & WILDLIFE SERVICE

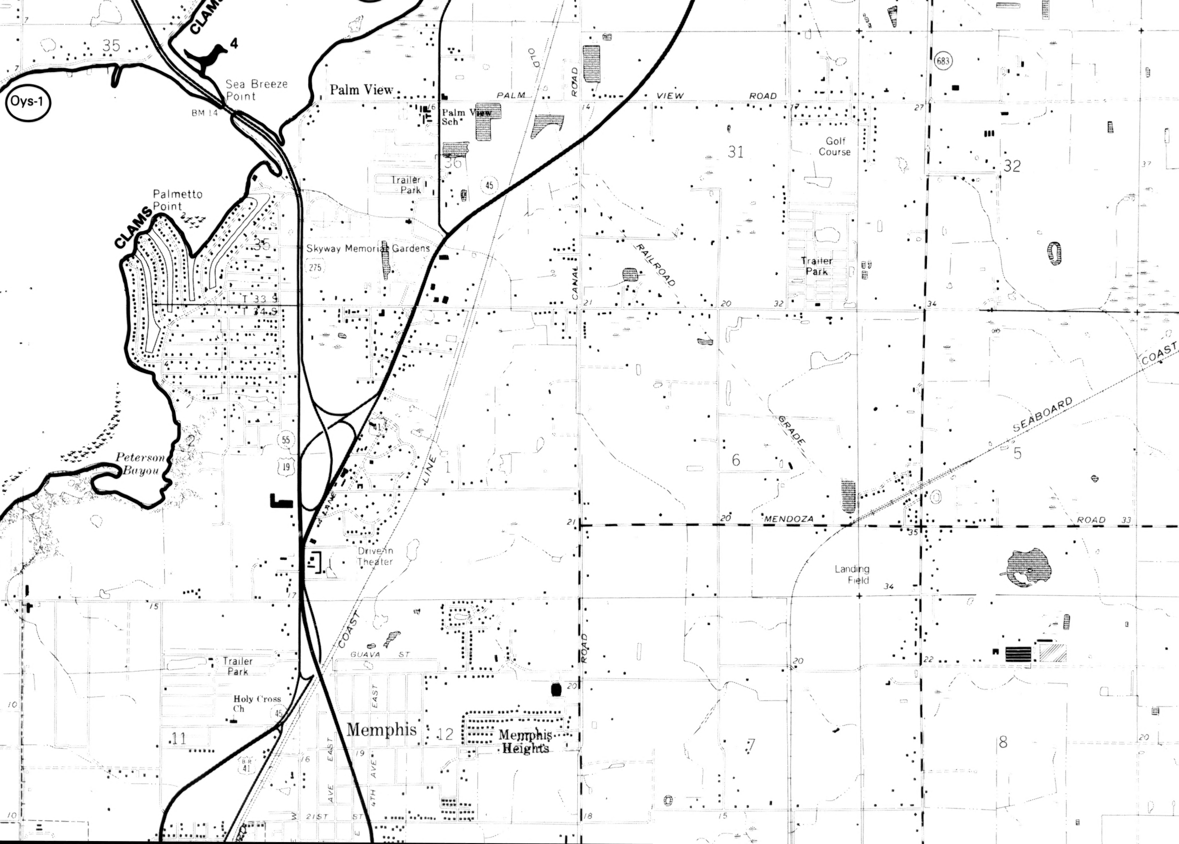
TOPICAL MAPS IN THIS ATLAS:
A. BIOLOGICAL RESOURCES
B. WATER RESOURCES

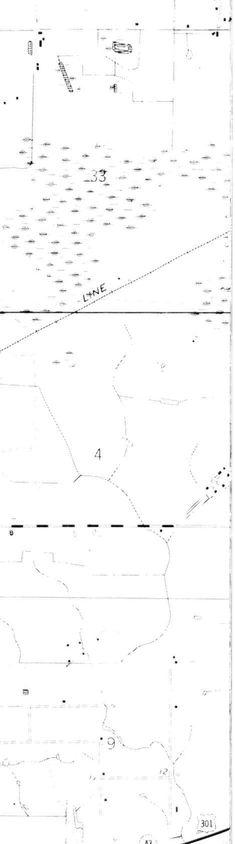
Produced by U.S. Fish and Wildlife Service

Projection and 1,000 meter grid, zone 17: Universal Transverse Mercator
10,000-foot grid ticks based on Florida coordinate system, east and west zones

Overlay material compiled in 1984 from latest available data obtained from Federal, State and Local government agencies and other sources


Key
Miguel Bay
Boots Point
Bayou
Oys-1
Oys-1
Oys-1
Oys-1
Oys-1
Sister Keys
TERRA
CLAMS
34
Bickel Mound Park
23
SHA
Critical Cr
Critical Bayou
32
Beville Point
CLAMS
Rattlesnake Key
5
4
8
Bird Key
BAY
TERRA CEIA
Gus Point
Little Bird Key
Cambar Bayou
Champlain Bayou
CLAMS
9
CLAMS
10
8
3


CLAMS
35
4
Oys-1
Sea Breeze
Point
BM 14
Palm View
PALM
VIEW
ROAD
OLD
ROAD
Palm View
Sch
683
31
Golf
Course
32
36
Trailer
Park
45
Palmetto
Point
CLAMS
35
Skyway Memorial Gardens
275
RAILROAD
Trailer
Park
CANAL
T 33 S
T 34 S
21
20
32
34
COAST
SEABOARD
GRADE
41
55
19
6
5
LINE
1
Peterson
Bayou
LANE
20
MENDOZA
ROAD
33
21
35
Drive-in
Theater
Landing
Field
34
17
15
COAST
GUAVA
ST
ROAD
20
22
Trailer
Park
20
Holy Cross
Ch
45
EAST
10
11
Memphis
12
Memphis
Heights
7
8
20
B R
41
16
EAST
AVE
19
AVE
4TH
10
W
21ST
ST
ST
18
15


33
LINE
4
9
12
301
43

Projection and 1,000-meter grid, zone 17: Universal
Transverse Mercator
10,000-foot grid ticks based on Florida coordinate
system, east and west zones

Overlay material compiled in 1984 from
latest available data obtained from
Federal, State and Local government
agencies and other sources.

There are no maps A19, A20, A21 due to a lack of data.

LEGEND

SHELLFISH HARVEST AREA
(Florida Dept. of Natural Resources)

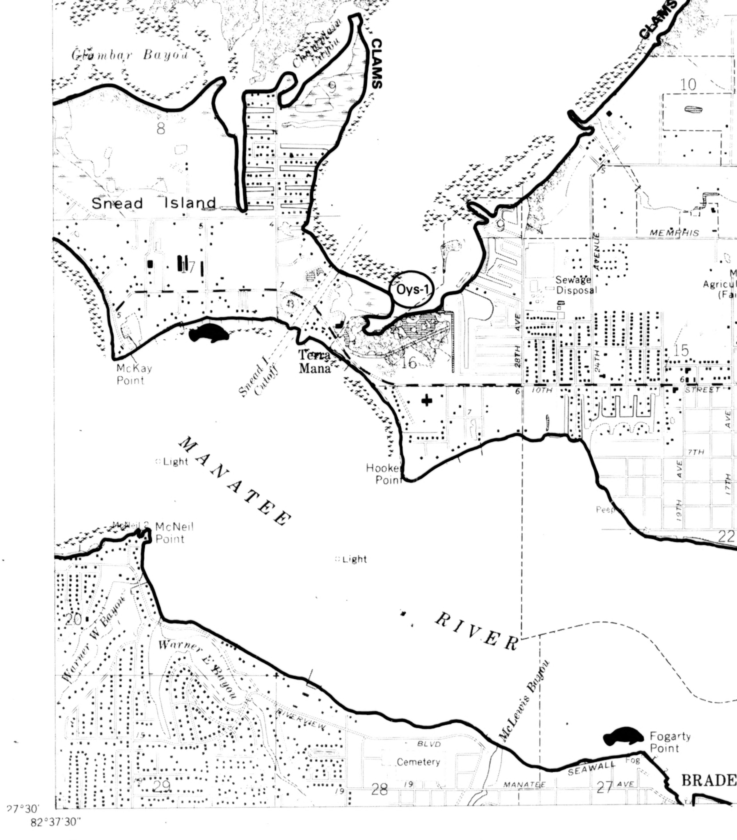
SHA	Shellfish Harvest Approved
SHCA	Shellfish Harvest Conditionally Approved

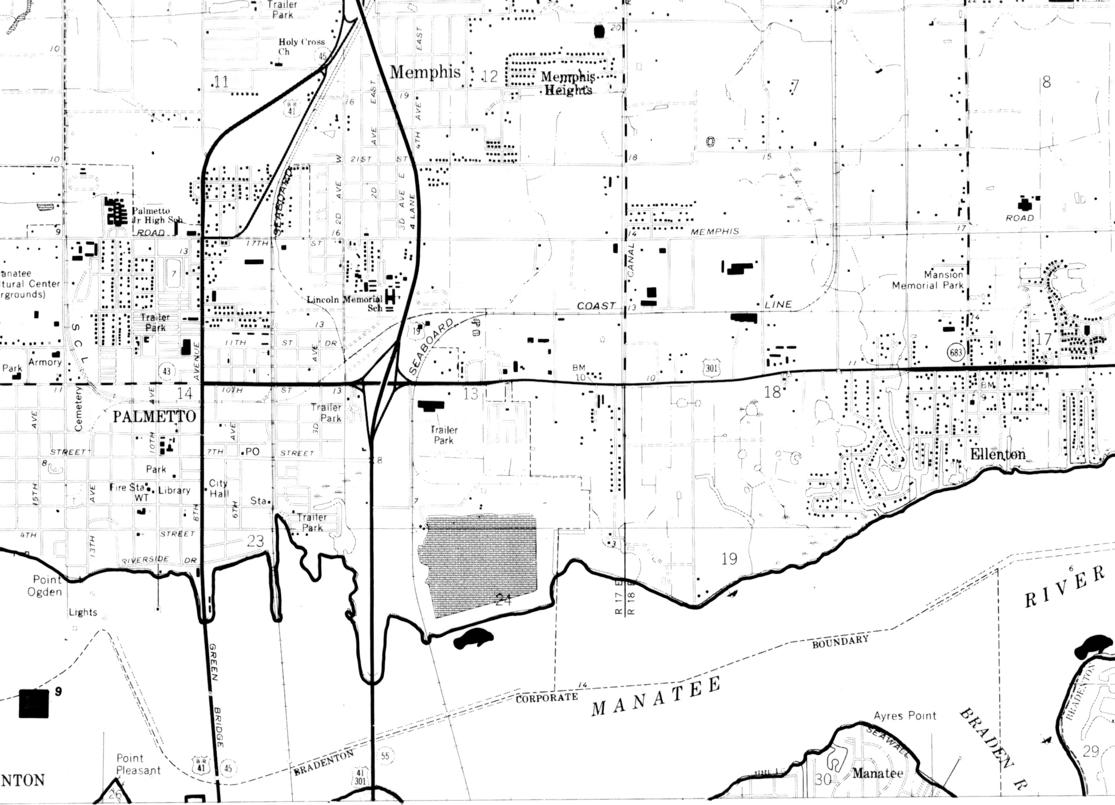
NOTE: Due to Dept. of Natural Resources (DNR) water quality standards all other estuarine areas are prohibited or unclassified as to shellfish harvest status and are officially unapproved. For further info. on status of harvest areas contact DNR - Shellfish Environmental Assessment Section.

Oys-1	Public Oyster Bed
Oys-2	Private Oyster Bed (Lease)
CLAMS	Clam Bed

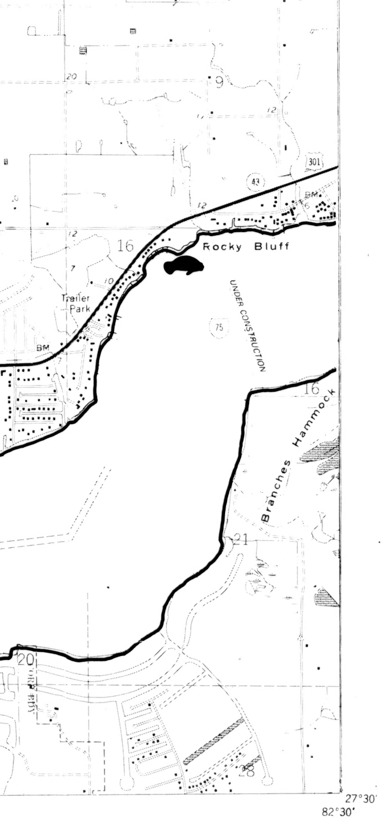
FINFISH SPAWNING, NURSERY AND HARVEST AREAS
(Recreational Hook and Line Fishing)

SPECIES #	FINFISH	SPAWNING													NURSERY AREA[1]	MAJOR NURSERY HABITATS							AREA OF ADULT ABUNDANCE[1]	MAJOR ADULT HABITATS						MIGRATION TYPE[2]
	CATEGORY Common Name	LOCATION[1]	SEASON J		M		M		J		S		N			Seagrass	Mangrove	Saltmarsh	Beach	Coral Reef	Artificial Reef	Open Water		Seagrass	Mangrove	Beach	Coral Reef	Artificial Reef	Open Water	
	ESTUARINE DEPENDENT FISHES																													
1	Red Drum	C	■	■							■	■	■	■	E	●	●	●					E	●	●	●				2


Glombar Bayou
Champlain Bayou
CLAMS
CLAMS
8
9
10
Snead Island
MEMPHIS
AVENUE
17
Sewage Disposal
Agricul
(Fa
Oys-1
28TH AVE
24TH
15
McKay Point
Snead I. Cutoff
Terra Mana
16
10TH
STREET
AVE
7TH
AVE
17TH
19TH
MANATEE
Light
Hooker Point
Peeple
22
McNeil Point
Light
20
Warner W Bayou
Warner E Bayou
RIVER
McLewis Bayou
RIVERVIEW
BLVD
Cemetery
Fogarty Point
SEAWALL
Fog
15
29
28
MANATEE
27 AVE
BRADE
27°30'
82°37'30"


Trailer Park
Holy Cross Ch
Memphis
Memphis Heights
11
12
7
8
EAST
19
AVE
4TH
21ST
ST
SEABOARD
2D
3D AVE E
4 LANE
16
17TH
Palmetto Jr High Sch
ROAD
Manatee Agricultural Center (Fairgrounds)
Trailer Park
Lincoln Memorial Sch
COAST
LINE
MEMPHIS
CANAL
ROAD
Mansion Memorial Park
11TH
DR
Park
Armory
SCL
43
AVENUE
10TH
BM 10
301
683
17
14
13
18
PALMETTO
Cemetery
Trailer Park
Trailer Park
STREET
7TH
PO
Park
Fire Sta
WT
Library
City Hall
Sta
Trailer Park
Ellenton
15TH
13TH
8TH
6TH
4TH
23
RIVERSIDE DR
Point Ogden
Lights
24
19
R 17 E
R 18 E
RIVER
BOUNDARY
CORPORATE
MANATEE
GREEN BRIDGE
Point Pleasant
B.R. 41
45
BRADENTON
55
41
301
Ayres Point
SEAWALL
Manatee
30
29
BRADEN R
BRADENTON
9
26
NTON

SCALE 1:24 000


9
20
12
301
43
16
12
BM
Rocky Bluff
7
10
Trailer Park
BM
75
UNDER CONSTRUCTION
16
Branches Hammock
21
20
28
27°30'
82°30'

FINFISH SPAWNING, NURSERY AND HARVEST AREAS
(Recreational Hook and Line Fishing)

SPECIES #	FINFISH CATEGORY Common Name	SPAWNING LOCATION[1]	SPAWNING SEASON J		M		M		J		S		N		NURSERY AREA[1]	MAJOR NURSERY HABITATS Seagrass	Mangrove	Saltmarsh	Beach	Coral Reef	Artificial Reef	Open Water	AREA OF ADULT ABUNDANCE[1]	MAJOR ADULT HABITATS Seagrass	Mangrove	Beach	Coral Reef	Artificial Reef	Open Water	MIGRATION TYPE[2]
	ESTUARINE DEPENDENT FISHES																													
1	Red Drum	C	■	■							■	■	■	■	E	●	●	●					E	●	●	●				2
2	Spotted Seatrout	E			■	■	■	■	■	■	■	■			E	●	●	●					E	●	●					2
3	Snook	C					■	■	■						E	●	●	●					E	●	●					2
4	Sheepshead	C			■	■	■								C	●							C-E			●		●		1
5	Southern Flounder	C									■	■	■	■	C-E	●			●				C-E	●		⊘				2
6	Florida Pompano	CS				■	■	■	■	■	■	■			C-E				●				C-E			●			●	3
7	Striped Mullet	CS	■									■	■	■	E	●	●	●					E	●	●	●				3
8	Gulf Menhaden	C	■	■	■								■	■	E	●	●	●					C-E	●		●			●	3
9	Spanish Sardine	C						■	■	■	■				E	●	●	●					C-E	●		●			●	3
10	Black Drum	C	■	■	■	■	■						■	■	E	●	●	●					E	●	●	●				1
	REEF FISHES																													
11	Red Grouper	CS			■	■	■	■							CS-C	●				●	●		CS				●	●		2
12	Jewfish	CS							■	■					CS-C	●				●	●		CS-C				●	●		2
13	Gag Grouper	CS	■	■	■	■								■	CS-C	●				●	●		CS-C				●	●		2
14	Scamp	CS			■	■									CS	●				●	●		CS				●	●		2
15	Red Snapper	CS							■	■	■	■			CS-C	●				●	●		CS-C				●	●		2
16	Mangrove Snapper	CS				■	■	■	■	■					C-E	●	●						C-E				●	●		2
	COASTAL PELAGIC FISHES																													
17	King Mackerel	OCS					■	■	■	■	■				CS							●	CS-C				●	●	●	4
18	Spanish Mackerel	CS					■	■	■	■	■				CS							●	CS-C				●	●	●	4

[1]KEY:

E — Estuarine
C — Coastal
CS — Continental Shelf
OCS — Outer Continental Shelf

[2]MIGRATION TYPE:

1 — Residentially Restricted
2 — Random Residential Range
3 — Restricted Migration
4 — Extensive Migration

COLONIAL BIRD NESTING SITE *

Number appearing with symbol indicates colony sites. Colony sites and species - composition data are included in the narrative.

Shorebird

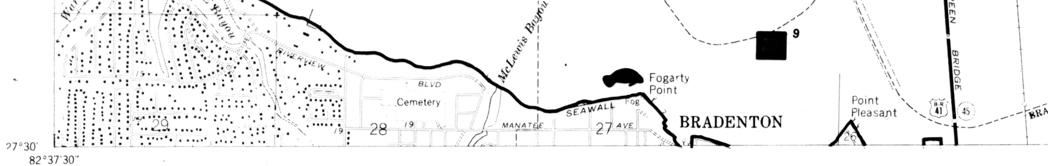
Wading Bird

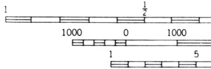
Brown Pelican

WEST INDIAN MANATEE HABITAT

MICROCOPY RESOLUTION TEST CHART
NBS - 1010a
(ANSI and ISO TEST CHART No. 2)

1.0


McLewis Bayou
Bayou
RIVERVIEW
BLVD
Cemetery
Fogarty Point
9
SEAWALL
Fog
MANATEE
AVE
29
28
27
26
19
BRADENTON
Point Pleasant
BRIDGE
41
45
27°30'
82°37'30"


1
½
1000
0
1000
1
5

THE TAMPA BAY ENVIRONMENTAL ATLAS WAS PRODUCED BY THE U.S. FISH AND WILDLIFE SERVICE, DIVISION OF BIOLOGICAL SERVICES NATIONAL COASTAL ECOSYSTEMS TEAM (FWS/OBS) FOR COASTAL PLANNERS, DECISION MAKERS AND THE GENERAL PUBLIC, TO DETERMINE AND EVALUATE CHANGE AND TO RESOLVE CONFLICTS AMONG LAND USES, FISH AND WILDLIFE REQUIREMENTS AND THE MAINTENANCE OF ECOLOGICAL DIVERSITY. THE STUDY AREA INCLUDES A MAJOR PORTION OF THE COASTAL COUNTIES OF PINELLAS, HILLSBOROUGH, MANATEE, AND A SMALL PORTION OF SARASOTA. THERE IS NO ATTEMPT, IN THE DESIGN OR PRODUCTS OF THIS STUDY, TO DEFINE THE LIMITS OF PROPRIETARY JURISDICTION OF ANY FEDERAL STATE, OR LOCAL GOVERNMENT TO ESTABLISH THE GEOGRAPHICAL SCOPE OF THE REGULATORY PROGRAMS OF GOVERNMENT AGENCIES.

THIS MAP HAS BEEN COMPILED FROM A VARIETY OF SOURCE MATERIALS INCLUDING MAPS, AERIAL PHOTOS, AND REPORTS. SINCE MANY SOURCES CONTAINED GENERALIZED LOCATIONS OF RESOURCES AND OTHER MAPPED FEATURES, THE USER SHOULD NOT RELY ON THESE MAPS FOR PRECISE MEASUREMENTS OF DISTANCES OR AREAS.

PRIMARY SOURCES OF MAPPED INFORMATION:

SHELLFISH HARVEST AREAS: Shellfish Harvest Area Maps, Dept. of Natural Resources, 1982.

PUBLIC & PRIVATE OYSTER BEDS: Cooperative Gulf of Mexico Estuarine Inventory and Study, Florida, McNulty, Lindall and Sykes, 1972.

CLAMS: Personal Communication, Discussion of Distribution Clams in Tampa Bay and Adjacent Brackish Waters, Mr. L. Tracy Three T's Clam Company, 1983 Mike Sprague, Draft Maps, Department of Natural Resources, 1984

SCALLOP BEDS: Personal Communication, Mr Bill Lyons Dept. of Natural Resources, Marine Research Laboratory, 1982

FINFISH SPAWNING, NURSERY & HARVEST AREAS: Florida's Fishing Grounds, Moe, 1970.

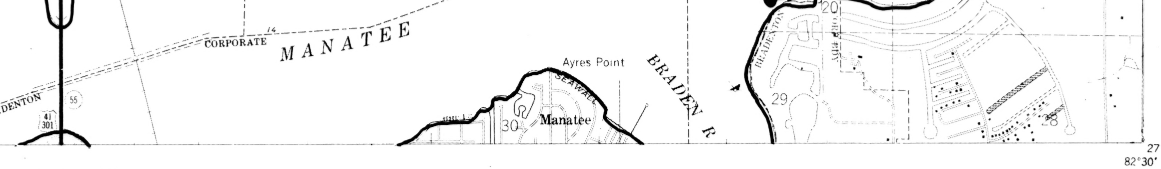
BIRD NESTING SITES: Florida Atlas of Breeding Sites for Herons and Their Allies: 1976-78, Nesbitt, S.A., Ogden, J.C., Kale II, H.W., et.al. U.S. Fish and Wildlife Service, 1982. Personal Communication, Maps and Data, Dr H.W. Kale II, Florida Audubon Society, 1982

MANATEE HABITAT: Boaters guide to Manatees, the gentle giants, Florida Marine Patrol, 1980.

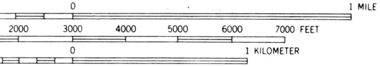
SEAGRASS BEDS: Tampa Bay Seagrass Maps, 1:10,000 and 1:24,000 Scales, Mangrove Systems, Inc 1980 National Wetlands Inventory Maps, 1:24,000 Scale, U.S. Fish and Wildlife Service, 1983.

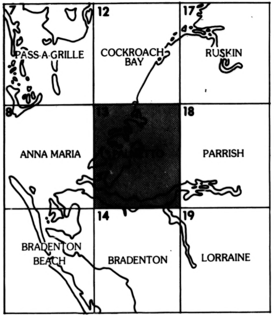
ARTIFICAL REEFS: Computer Printout of Florida Artifical Reefs, U.S. Army Corps of Engineers, 1981. Recreational Use Reefs in Florida: Artifical and Natural, Florida Sea Grant Program, 1979.

FOR COMPLETE REFERENCE SEE MAP NARRATIVE


CORPORATE
14
MANATEE
DENTON
55
41
301
Ayres Point
SEAWALL
30
Manatee
BRADEN R
BRADENTON
20
29
28
27°
82°30'

SCALE 1:24 000


0
1 MILE
2000
3000
4000
5000
6000
7000 FEET
0
1 KILOMETER


7
PASS-A-GRILLE
12
COCKROACH BAY
17
RUSKIN
8
ANNA MARIA
13
PALMETTO
18
PARRISH
BRADENTON BEACH
14
BRADENTON
19
LORRAINE

colony sites. Colony sites and species - composition data are included in the narrative.

Shorebird

Wading Bird

Brown Pelican

30'

WEST INDIAN MANATEE HABITAT

STATE MANATEE SANCTUARY

▨ SEAGRASS BEDS

■ ARTIFICAL REEF*
(Permitted by Florida Dept. of Environmental Regulation)
Numbers next to reefs refer to composition data in narrative

*Symbols appearing with numbers are described more fully in the narrative.

MICROFILMED FROM
BEST AVAILABLE COPY

MICROCOPY RESOLUTION TEST CHART
NBS - 1010a
(ANSI and ISO TEST CHART No. 2)

MONOCHROME RESOLUTION TEST CHART
10
11
12
13
14
15
16

MONOCHROME RESOLUTION TEST CHART
10
11
12
13
14
15
16